The increasing availability of online audio/visual academic lecture material enables new and exciting ways for disseminating knowledge that can potentially change the way people learn. Unfortunately untranscribed audio/visual data is difficult and tedious to search and browse, limiting its accessibility. Ideally automatic methods can be developed to enable fast, accurate and easy access to lecture content. Towards this goal, the MIT Spoken Lecture Processing Project aims to develop new techniques in the areas of automatic speech recognition, structure induction, and summarization that will enable efficient transcription, search, indexing, retrieval and browsing of audio/visual lecture materials. The technical language of academic lectures and lack of in-domain spoken data for training makes automatic speech recognition of lectures a significant challenge. This talk will discuss our on-going research with a specific focus on our efforts in automatic transcription of spoken lectures.